

## REMARKS

The application has been reviewed in light of the Final Office Action dated July 27, 2004.

Claims 1-5 are currently pending in the Application. In the Office Action, Claims 1 and 2 were rejected under 35 U.S.C. 102(e) as anticipated *Jonsson et al.* (U.S. 6,385,585), Claim 3 was rejected under 35 U.S.C. 103(a) as being unpatentable over *Jonsson* in view of *Makela et al.* (U.S. 6,301,338), and Claims 4-5 were rejected under 35 U.S.C. 103(a) as being unpatentable over *Jonsson* in view of *Svensson* (U.S. 6,301,338).

It is respectfully submitted that *Jonsson* relates to an apparatus for converting a digital symbol into a formant frequency and transmitting the formant frequency via a voice channel. Because the formant signals as disclosed in *Jonsson* have the same frequency characteristics as actual human speech, such signals are easily converted by a standard voice coder (found in conventional transceivers) for transmission to a receiver. Therefore, in *Jonsson*, utilizing said feature, the digital symbols are converted into a formant frequency identical to a frequency of human speech, which is supplied to a voice coder so as to be output by means of the voice coder. Finally, the output is transmitted to a receiver via the voice channel.

As previously presented, it is respectfully submitted that the Examiner is incorrect, as the prior description of Figs. 5A and 5B in cols. 9 and 10 of *Jonsson* makes clear that such a short message and/or alert message would first be transformed to a formant frequency and then processed in a vocoder before being transmitted over the voice band. (See, col. 9, lines 29-34, and 62-67) The subsequent description of Fig. 6 (at col. 11, lines 4-16) also makes clear that symbols are first converted to formant frequencies before transmission over the voice band. Basically, the Examiner is asserting that transmitting a digital symbol, even though converted to formant frequencies before transmission over the voice band, reads on transmitting in character format, as is disclosed in Claims 1 and 5 of present application.

In summary, according to *Jonsson*, because a voice signal and data signal are output via one voice coder, a microphone for voice communication is cut off upon input of data through a keypad for transmission of the data signal.

However, the present invention, more specifically Claims 1 and 5, relate to transmitting and receiving a character message in mobile communication terminals during a conversation by telephone, wherein the character message is set in a general character message format and is transmitted *without converting the character data* via a speech path or channel for a conversation by telephone. Therefore, according to the present invention, unlike *Jonsson*, a voice coder is not necessary for transmitting a character message, and therefore, a conversion into a formant frequency is also unnecessary. Further, in the present invention, because a character message is not transmitted via the voice coder, a microphone for voice communication by telephone is always functioning even while inputting data through a keypad or during identifying the content of the received character message.

In response to our previous argument, the Examiner now cites Col. 10, lines 39-44 of *Jonsson*, which reads as follows:

“In still another exemplary application, the user may send short messages or commands to the server both during voice conversation and when no communication is going on. The server may be the receiver of the information or it may transfer it to the final destination on any bearer channel.”

The Examiner then states that “[t]hose skilled in the art would acknowledge that a short (text) message which is not in any form of conversion format and no need to pass through a voice coder before transmission.” It is respectfully submitted that the Examiner is attempting to argue that *Jonsson* teaches when no conversation is taking place, no conversion would be performed on the character data before transmission. However, as recited in the independent claims of the present application, non-converted character data is being transmitted *during a conversation*. This feature is not taught in this cited section or any other section of *Jonsson*.

Therefore, it is respectfully submitted that the Examiner is incorrect in rejecting the claims of the present application in view of *Jonsson*.

Referring to the apparatus illustrated in FIG. 6 in *Jonsson*, if a user inputs a digital symbol, i.e., character data, through a key pad 601 in the process of forming a speech path, a controller 603 blocks the speech path. Accordingly, an audio CODEC and a data CODEC are constructed as a unitary form. Thereafter, the controller 603 and a speech processor 607 convert the input digital symbol into a formant frequency according to a predetermined program and output the formant frequency to a vocoder.

The vocoder voice codes the received formant frequency and transmits it as voice data. In light of the above, it is noted that in order to transmit a character data through a voice channel, it is necessary to convert the character data into a voice data. Therefore, *Jonsson* must convert character data, i.e., a symbol, into a formant frequency using a vocoder.

In view of the foregoing, it is respectfully submitted that the Examiner is incorrect in asserting that although the digital symbol is converted into the formant frequency before being transmitted to a voice band, the digital symbol is still transmitted in character format. For example, in *Jonsson*, when a user would like to send a character message during a voice communication, if a user inputs the above message by means of a key pad 601, the communication is blocked because only one signal out of voice signal and data signal can be transmitted through one path. Thereafter, the character data is converted into formant frequency and the formant frequency is voice coded to thereby be transmitted over the voice channel. Accordingly, under the construction of *Jonsson*, the voice data and character data cannot be transmitted together over a voice channel.

However, according to the present invention, even though a user may input a character data by means of a key pad while forming a speech path, i.e., during the communication, the speech path is continuously linked and the input character data can be transmitted together with the voice data through the same channel, i.e., a voice channel. Accordingly, contrary to *Jonsson*,

the present invention does not require the voice communication to be blocked in order to transmit the character data. Further, the input data does not have to be converted into formant frequency, nor does the present invention require a vocoder for voice coding the formant frequency.

Additionally, in regard to the Examiner's assertion that those skilled in the art would easily acknowledge the present invention, please note that at the time of filing this application, the technical solution of the present invention, i.e., that the character data can be transmitted during communication, was not capable of being implemented. At that time, in order to transmit the character data during the communication, a speech path was first blocked, i.e., a channel for transmitting a voice data was blocked, and then connected to a channel for transmitting character data to thereby transmit the character data.

In this regard, the *Jonsson* discloses techniques for transmitting digital information through a voice channel in order to overcome the above-identified constraint of the conventional art. That is, in *Jonsson*, if the digital information is input during communication, the previously linked communication is blocked in order to link the digital information to the voice channel and the digital information is converted into the formant frequency, such that the converted data is voice coded in a vocoder.

According to the present invention, when a user would like to transmit character data during the communication, the speech path is continuously linked and the character data is transmitted to a destination together with the voice data, without any conversion procedure, through the same channel. Accordingly, it is respectfully submitted that the Examiner's assertion is incorrect in light of the state of art in 1998.

Accordingly, it is respectfully submitted that *Jonsson* fails to teach or suggest all of the recitations of independent Claim 1. Thus, for at least the reasons given above, it is respectfully requested that the Examiner withdraw the rejection of Claim 1, and it is respectfully submitted that independent Claim 1 is in condition for allowance.

As indicated above, independent Claim 5 was rejected under 35 U.S.C. 103(a) based on the combination of *Jonsson* and *Svensson*. However, analogous to independent Claim 1, it is respectfully submitted that *Jonsson* does not show “receiving a character message *including non-converted character data* from the mobile communication terminal of the other party via the speech path”, as recited in Claim 5. In addition, it is respectfully submitted that *Svensson* is also silent on this recitation of independent Claim 5.

Accordingly, without conceding that the combination of *Jonsson* and *Svensson* is proper, for at least this reason, it is respectfully submitted that the combination of *Jonsson* and *Svensson* fails to describe all of the recitations of Claim 5. Thus, it is respectfully submitted that *Jonsson* and *Svensson* fail to render Claim 5 obvious for at least this reason. Reconsideration and allowance of Claim 5 is also respectfully requested.

Without conceding the patentability per se of dependent Claims 2-4, it is submitted that Claims 2-4 are allowable at least by virtue of their dependencies on independent Claim 1. Reconsideration and allowance of Claims 2-4 is also respectfully requested.

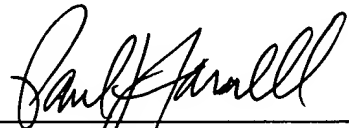
Additionally, it is respectfully submitted that this is a premature Final Office Action. That is, the Examiner is not permitted to issue a Final Office Action at this time. According to the MPEP § 706.07(b), “it would not be proper to make final a first Office action in a continuing or substitute application where that application contains material which was presented in the earlier application after final rejection or closing of prosecution but was denied entry because (A) new issues were raised that required further consideration and/or search, or (B) the issue of new matter was raised.” Therefore, because the Examiner stated in the Advisory Action dated May 19, 2004, that the previously filed amendments would not be entered because they required further consideration and/or search, it is respectfully submitted that the Finality of the current Office Action is improper, and it is respectfully requested that the Finality of the Office Action be withdrawn.

In view of the foregoing remarks, it is respectfully submitted that all pending claims, namely Claims 1-5, are in condition for allowance. Early and favorable consideration and allowance of Claims 1-5 is respectfully requested. Should the Examiner believe that a telephone or personal interview may facilitate resolution of any remaining matters, the Examiner is respectfully requested to contact Applicant's attorney at the number indicated below.

Respectfully submitted,

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